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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,221	10/03/2003	Garrett L. Limmer	M-100303-GL	3289

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EXAMINER	
TRIEU, VAN THANH	

ART UNIT	PAPER NUMBER
2636	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/679,221	LIMMER, GARRETT L.	
	Examiner	Art Unit	
	Van T Trieu	2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/3/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the claimed "potable-water valve" is not shown in the specification.

Claim Objections

2. Claim 15 is objected to because of the following informalities: line 2, the phrase "potable-water valve" is incorrect. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-6 and 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Doumit et al** [US 6,526,807] in view of **Richards** [US 5,190,069].

Regarding claim 1, the claimed a leak-stopper system for water plumbing comprising: a leak-probe circuit positioned in water-detection proximity to water plumbing for a building (the leak probe circuit board 170 having a plurality of sensor wires 100 or probe

means 134, see Figs. 1-3, col. 4, lines 14-18, col. 7, lines 18-27 and col. 8, lines 64-65); but **Doumit et al** fails to disclose the electrical-probe circuit having electrical communication from a predetermined plurality of predetermined spaced-apart leak sensors on the leak-probe circuit to a control board. However, **Doumit et al** teaches that the leak probe circuit board 170 having a plurality of sensor wires 100 or probe means 134 or 303, each of sensor wires or probe means is interconnected with corresponding plurality of sensor means 130 laying to different color coding, which is communicated with the central control 20, see Figs. 1-4, col. 7, lines 18-27, col. 8, lines 13-33 and 58-67 and col. 9, lines 1-36. **Richards** suggests that the leak probe circuit 12 includes two wires 24, 26 and spaced apart cell sensor elements 22 to be communicated with the control box 18, see Figs. 1 and 2, col. 2, lines 26-34. Therefore, it would have been obvious to one skill in the art at the time the invention was made to substitute the spaced apart cell sensor elements of **Richards** for the plurality of sensor means of **Doumit et al** in order to increase the number of leak sensors and to precisely identifying and locating of the exact leak than by the limiting of color code.

The claimed visual leak signalers on the control board in electrical communication with the leak sensors for electrically detecting and signaling location of any water leakage of the water plumbing proximate one or more of the leak sensors to at least one of the visual leak signalers on the control board (the central control 20 includes of bright numeric display 55 and LEDs 53, 54 for identifying and locating of the leaks along the pipes, see Figs. 1 and 2, col. 7, lines 29-35 and 55-67 and col. 8, lines 1-12); and the water plumbing including a plumbing valve with predetermined features for shutting of

water to the water plumbing predetermined in response to detection of leakage of the water plumbing in order to allow the leakage to be fixed before water damage occurs to the building or to contents of the building (the plumping valves could adapted to shut off water source upon detecting of leak, see col. 2, lines 10-61 and col. 18, lines 38-53); and the leak sensors being articulated for detecting water leakage by closing of circuitry of the leak sensors predetermined with leakage water for communicating position of the leakage water by communicating position of the at least one leak sensors with circuitry closed by the leakage water to predetermined visual leak signalers on the control board (each of the leak sensors communicates with the central control 20 for identifying and locating of the water leak by the LEDs 26-30, 53, 54 and numeric display 55, see Figs. 1-3, col. 7, lines 29-33 and 55-67 and col. 8, lines 1-57); and the control board being articulated in coordination with the water plumbing and the electrical-probe circuit or indicating location of the leakage water by indicating location of at least one of the leak sensors with circuitry closed by the leakage water (the central control 20 for identifying and locating of the water leak by the LEDs 26-30, 53, 54 and numeric display 55, see Figs. 1-3, col. 7, lines 29-33 and 55-67 and col. 8, lines 1-57); and the electrical source for supplying user-safe electrical current to components of the leak-stopper system for detecting leaks, for communicating their location, for operating the plumbing valve and for any other related functions (the AC main power source and the backup battery, see col. 12, lines 44-67, col. 13, lines 1-7 and col. 17, lines 7-25).

Regarding claim 2, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above, and including the isolated power source (the backup battery, see col. 12, lines 44-67, col. 13, lines 1-7 and col. 17, line 7-25).

Regarding claim 3, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 2 above, and including the rechargeable battery, see col. 17, lines 24-25.

Regarding claim 4, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 2 above, and including the DC current and the transformer, see Fig. 16, col. 23, lines 11-23).

Regarding claim 5, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above, and including the plurality of probe sensors.

Regarding claim 6, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above, and including the leak probe circuit includes a valve control line in communication with the plumbing valve from the control board, which reads upon the implementing of the plumbing valves of Welch et al to the central control 20, see Figs. 1 and 2, col. 2, lines 10-47 and col. 18, lines 38-53).

Regarding claim 11, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above, and including the plurality of LEDs 26-30, 53 and 54, see Figs. 1 and 2.

Regarding claim 12, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above, and including the audio signaler (the audio alarm 52, see Fig. 2, col. 8, lines 4-12).

Regarding claim 13, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above, and including the remote control (the portable household electronic devices 20, see col. 7, lines 35-54).

Regarding claim 14, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above, and including the network (the global computer network such as Internet or intranets, see col. 4, lines 44-51 and col. 5, lines 60-65).

Regarding claim 15, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above, and including the portable water valve, which reads upon the solenoid valve.

Regarding claim 16, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above, see Figs. 1, 2 and 7.

Regarding claim 17, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above, see Figs. 1 and 2.

Regarding claim 18, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 17 above, and including the pipe clasp, see Figs. 1-3.

Regarding claim 19, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 17 above, and including the clasp tray, which reads upon the sensor probe means 134 or 303, see Figs. 3 and 4.

Regarding claim 20, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 19 above, and including the pipe clasp, see Fig. 3.

Regarding claim 21, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 17 above, and including the adhesive, see Fig. 3.

Regarding claim 22, all the claimed subject matters are discussed between **Doumit et al** and **Richards** in respect to claim 1 above.

4. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Doumit et al** and **Richards** and further in view of **Diduck** [US 6,025,788] Regarding claim 7, **Doumit et al** fails to disclose the override switch for manually overriding automatic closing of the plumping. However, **Doumit et al** teaches that the central control 20 automatically controls to shut off the valve upon detecting of water leak for avoiding false-alarms, see col. 2, lines 10-47 and col. 18, lines 38-53. **Diduck** suggest that the apparatus and system of a local or remote control water leak detection and automatically shutoff the water valve 26 upon detected of unwanted water leaks by an electro-mechanic motor 24. The system is also versatile and adaptable a manually override for closing the valve 26 when the electrical power are low or lost, see Figs. 1-3, col. 3, lines 20-23, col. 6, lines 1-39, col. 13, lines 30-35 and col. 14, lines 15-20. Therefore, it would have been obvious to one skill in the art at the time the invention was made to adapt the manually override for closing the valve of **Diduck** for the automatically shutting off the valve of **Doumit et al** and **Richards** in order to provide a greater flexibility operating of the water leak detection system and to prevent of damage when the electrical power is low or lost.

Regarding claim 8, **Doumit et al** fails to disclose the override switch includes a toggle switch. However, according to the combination of the manually override closing valve between **Doumit et al** and **Richards** and **Diduck** in respect to claim 7 above, and **Diduck** also uses of the reverse toggle switch 54 to operate the light 56, see Fig. 11,

col. 11, lines 14-25. Therefore, it would have been obvious to one skill in the art at the time the invention was made to utilize the toggle switch for the manually override for closing the valve since the toggle switch is readily available in marketplace and it easily to use.

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Doumit et al** and **Richards** and **Diduck** and further in view of **Faulk** [US 5,568,825]

Regarding claim 9, **Doumit et al** fails to disclose the override time regulator for regulating time of override of automatic closing of the plumping valve. However, **Doumit et al** teaches that the central control 20 automatically controls to shut off the valve upon detecting of water leak for avoiding false-alarms, see col. 2, lines 10-47 and col. 18, lines 38-53. **Faulk** suggests that a system for detecting leakage and unwanted flow in a fluid supply within a building capable of detecting small leaks and shutting off flow when such occur. The system includes a control means 20 having a selectable override timer means 24 to provide a short operational time period in which water flow is allowed even when the system is activated, see Figs. 1 and 2, col. 2, lines 24-42, col. 3, lines 13-22, col. 4, lines 43-55 and col. 5, lines 32-41. Therefore, it would have been obvious to one skill in the art at the time the invention was made to utilize the selectable override timer means of **Faulk** to the central control of **Doumit et al** and **Richards** and **Diduck** in order that continuously operational appliances, as well as allowing any occupants of the building to utilize small water volumes for flushing and refilling the

toilet, washing hands, brushing teeth, getting a drink, etc. before shutting off the water valve.

Regarding claim 10, **Doumit et al** fails to disclose the rotational knob for being rotated in a rotational direction predetermined for increase of time of override of the automatic closing of the plumping valve. However, according to the combination between **Doumit et al** and **Richards** and **Diduck** and **Faulk** in respect to claim 9 above, wherein the predetermined short time for override can be selected by the override timer means 24, see Fig. 1, col. 5, lines 33-41. Therefore, it would have been obvious to one skill in the art to recognize that the selectable override timer means could be touch button switches or rotating switches for a user to manually selecting the time, since both switches provides the same functions of selecting time, and the rotating switch is less cost than of the electronic push button switches.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Doumit discloses a system for early detection of water leaks at particular locations in any water dependent appliance and apparatus used in homes. [US 6,147,613]

Caise et al discloses a microprocessor based control system to monitor flow in a portable water system and compares the flow with pre-set programs of time of day and duration of flow. [US 6,105,607]

Welch Jr., et al discloses a fail-safe system for detection of water leaks comprising of valves for shutting off the supply of water to the appliances. [US 5,229,750]

7. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (571) 272-2981.

Van Trieu
Primary Examiner
Date: 3/2/05